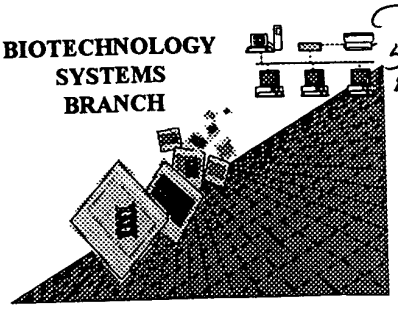
n/a

#6

BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number: 09/056,019

Art Unit / Team No. : 1615

Date Processed by STIC: 9/23/98

THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.

PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,

2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY

THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.

IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:

ARTI SHAH 703-308-4212

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION **US/09/056,019**

DATE: 09/23/98
TIME: 14:11:31

Input Set: **I056019.RAW**

This Raw Listing contains the General Information Section and up to first 5 pages.

New format see p. 5

Does Not Comply
Corrected Diskette Needed

<110> APPLICANT: Tuomanen, Elaine I.
Wizemann, Theresa
Masure, H. R.
Johnson, Leslie S.
Koenig, Scott
<120> TITLE OF INVENTION: POLYPEPTIDE COMPRISING THE AMINO ACID OF AN N-TERMINAL CHOLINE BINDING PROTEIN A TRUNCATE, VACCINE DERIVED THEREFROM AND USES THEREOF
<130> FILE REFERENCE: 1340-1-017 msc
<140> CURRENT APPLICATION NUMBER: US/09/056,019
<141> CURRENT FILING DATE: 1998-04-17
<160> NUMBER OF SEQ ID NOS: 39
<170> SOFTWARE: PatentIn Ver. 2.0
<210> SEQ ID NO 1
<211> LENGTH: 406
<212> TYPE: PRT
<213> ORGANISM: Streptococcus pneumoniae
<400> SEQUENCE: 1

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Glu Ser Gln Ala Glu Gln Gly Glu Gln Pro Lys Lys Leu Asp Ser Glu
            20                  25                  30
Arg Asp Lys Ala Arg Lys Glu Val Glu Glu Tyr Val Lys Lys Ile Val
        35                  40                  45
Gly Glu Ser Tyr Ala Lys Ser Thr Lys Lys Arg His Thr Ile Thr Val
    50                  55                  60
Ala Leu Val Asn Glu Leu Asn Asn Ile Lys Asn Glu Tyr Leu Asn Lys
65                  70                  75                  80
Ile Val Glu Ser Thr Ser Glu Ser Gln Leu Gln Ile Leu Met Met Glu
                85                  90                  95
Ser Arg Ser Lys Val Asp Glu Ala Val Ser Lys Phe Glu Lys Asp Ser
            100                 105                 110
Ser Ser Ser Ser Ser Ser Asp Ser Ser Thr Lys Pro Glu Ala Ser Asp
        115                 120                 125
Thr Ala Lys Pro Asn Lys Pro Thr Glu Pro Gly Glu Lys Val Ala Glu
    130                 135                 140
Ala Lys Lys Lys Val Glu Glu Ala Glu Lys Lys Ala Lys Asp Gln Lys
145                 150                 155                 160
Glu Glu Asp Arg Arg Asn Tyr Pro Thr Ile Thr Tyr Lys Thr Leu Glu
                165                 170                 175
Leu Glu Ile Ala Glu Ser Asp Val Glu Val Lys Lys Ala Glu Leu Glu
            180                 185                 190
Leu Val Lys Val Lys Ala Asn Glu Pro Arg Asp Glu Gln Lys Ile Lys
        195                 200                 205
```

Gln Ala Glu Ala Glu Val Glu Ser Lys Gln Ala Glu Ala Thr Arg Leu
210 215 220
Lys Lys Ile Lys Thr Asp Arg Glu Glu Ala Glu Glu Glu Ala Lys Arg
225 230 235 240
Arg Ala Asp Ala Lys Glu Gln Gly Lys Pro Lys Gly Arg Ala Lys Arg
245 250 255
Gly Val Pro Gly Glu Leu Ala Thr Pro Asp Lys Lys Glu Asn Asp Ala
260 265 270
Lys Ser Ser Asp Ser Ser Val Gly Glu Glu Thr Leu Pro Ser Pro Ser
275 280 285
Leu Lys Pro Glu Lys Lys Val Ala Glu Ala Glu Lys Lys Val Glu Glu
290 295 300
Ala Lys Lys Lys Ala Glu Asp Gln Lys Glu Glu Asp Arg Arg Asn Tyr
305 310 315 320
Pro Thr Asn Thr Tyr Lys Thr Leu Glu Leu Glu Ile Ala Glu Ser Asp
325 330 335
Val Glu Val Lys Lys Ala Glu Leu Glu Leu Val Lys Glu Glu Ala Lys
340 345 350
Glu Pro Arg Asn Glu Glu Lys Val Lys Gln Ala Lys Ala Glu Val Glu
355 360 365
Ser Lys Lys Ala Glu Ala Thr Arg Leu Glu Lys Ile Lys Thr Asp Arg
370 375 380
Lys Lys Ala Glu Glu Glu Ala Lys Arg Lys Ala Ala Glu Glu Asp Lys
385 390 395 400
Val Lys Glu Lys Pro Ala
405

<210> SEQ ID NO 2
<211> LENGTH: 655
<212> TYPE: PRT
<213> ORGANISM: Streptococcus pneumoniae
<400> SEQUENCE: 2
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Glu Ser Gln Ala Glu Gln Gly Glu Gln Pro Lys Lys Leu Asp Ser Glu
20 25 30
Arg Asp Lys Ala Arg Lys Glu Val Glu Glu Tyr Val Lys Lys Ile Val
35 40 45
Gly Glu Ser Tyr Ala Lys Ser Thr Lys Lys Arg His Thr Ile Thr Val
50 55 60
Ala Leu Val Asn Glu Leu Asn Asn Ile Lys Asn Glu Tyr Leu Asn Lys
65 70 75 80
Ile Val Glu Ser Thr Ser Glu Ser Gln Leu Gln Ile Leu Met Met Glu
85 90 95
Ser Arg Ser Lys Val Asp Glu Ala Val Ser Lys Phe Glu Lys Asp Ser
100 105 110
Ser Ser Ser Ser Ser Ser Asp Ser Ser Thr Lys Pro Glu Ala Ser Asp
115 120 125
Thr Ala Lys Pro Asn Lys Pro Thr Glu Pro Gly Glu Lys Val Ala Glu
130 135 140
Ala Lys Lys Lys Val Glu Glu Ala Glu Lys Lys Ala Lys Asp Gln Lys

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/056,019

Input Set: I056019.RAW

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145                 150                 155                 160
Glu Glu Asp Arg Arg Asn Tyr Pro Thr Ile Thr Tyr Lys Thr Leu Glu
                165                 170                 175
Leu Glu Ile Ala Glu Ser Asp Val Glu Val Lys Lys Ala Glu Leu Glu
            180                 185                 190
Leu Val Lys Val Lys Ala Asn Glu Pro Arg Asp Glu Gln Lys Ile Lys
        195                 200                 205
Gln Ala Glu Ala Glu Val Glu Ser Lys Gln Ala Glu Ala Thr Arg Leu
    210                 215                 220
Lys Lys Ile Lys Thr Asp Arg Glu Glu Ala Glu Glu Glu Ala Lys Arg
225                 230                 235                 240
Arg Ala Asp Ala Lys Glu Gln Gly Lys Pro Lys Gly Arg Ala Lys Arg
                245                 250                 255
Gly Val Pro Gly Glu Leu Ala Thr Pro Asp Lys Lys Glu Asn Asp Ala
            260                 265                 270
Lys Ser Ser Asp Ser Ser Val Gly Glu Glu Thr Leu Pro Ser Pro Ser
        275                 280                 285
Leu Lys Pro Glu Lys Lys Val Ala Glu Ala Glu Lys Lys Val Glu Glu
    290                 295                 300
Ala Lys Lys Lys Ala Glu Asp Gln Lys Glu Glu Asp Arg Arg Asn Tyr
305                 310                 315                 320
Pro Thr Asn Thr Tyr Lys Thr Leu Glu Leu Glu Ile Ala Glu Ser Asp
                325                 330                 335
Val Glu Val Lys Lys Ala Glu Leu Glu Leu Val Lys Glu Glu Ala Lys
            340                 345                 350
Glu Pro Arg Asn Glu Glu Lys Val Lys Gln Ala Lys Ala Glu Val Glu
        355                 360                 365
Ser Lys Lys Ala Glu Ala Thr Arg Leu Glu Lys Ile Lys Thr Asp Arg
    370                 375                 380
Lys Lys Ala Glu Glu Glu Ala Lys Arg Lys Ala Ala Glu Glu Asp Lys
385                 390                 395                 400
Val Lys Glu Lys Pro Ala Glu Gln Pro Gln Pro Ala Pro Ala Pro Lys
                405                 410                 415
Ala Glu Lys Pro Ala Pro Ala Pro Lys Pro Glu Asn Pro Ala Glu Gln
            420                 425                 430
Pro Lys Ala Glu Lys Pro Ala Asp Gln Gln Ala Glu Glu Asp Tyr Ala
        435                 440                 445
Arg Arg Ser Glu Glu Glu Tyr Asn Arg Leu Thr Gln Gln Gln Pro Pro
    450                 455                 460
Lys Thr Glu Lys Pro Ala Gln Pro Ser Thr Pro Lys Thr Gly Trp Lys
465                 470                 475                 480
Gln Glu Asn Gly Met Trp Tyr Phe Tyr Asn Thr Asp Gly Ser Met Ala
                485                 490                 495
Thr Gly Trp Leu Gln Asn Asn Gly Ser Trp Tyr Tyr Leu Asn Ser Asn
            500                 505                 510
Gly Ala Met Ala Thr Gly Trp Leu Gln Asn Asn Gly Ser Trp Tyr Tyr
        515                 520                 525
Leu Asn Ala Asn Gly Ser Met Ala Thr Gly Trp Leu Gln Asn Asn Gly
    530                 535                 540
Ser Trp Tyr Tyr Leu Asn Ala Asn Gly Ser Met Ala Thr Gly Trp Leu
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545 550 555 560
Gln Tyr Asn Gly Ser Trp Tyr Tyr Leu Asn Ala Asn Gly Ser Met Ala
565 570 575
Thr Gly Trp Leu Gln Tyr Asn Gly Ser Trp Tyr Tyr Leu Asn Ala Asn
580 585 590
Gly Asp Met Ala Thr Gly Trp Val Lys Asp Gly Asp Thr Trp Tyr Tyr
595 600 605
Leu Glu Ala Ser Gly Ala Met Lys Ala Ser Gln Trp Phe Lys Val Ser
610 615 620
Asp Lys Trp Tyr Tyr Val Asn Gly Ser Gly Ala Leu Ala Val Asn Thr
625 630 635 640
Thr Val Asp Gly Tyr Gly Val Asn Ala Asn Gly Glu Trp Val Asn
645 650 655

<210> SEQ ID NO 3
<211> LENGTH: 284
<212> TYPE: PRT
<213> ORGANISM: Streptococcus pneumoniae
<400> SEQUENCE: 3
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1 5 10 15
Glu Ser Gln Ala Glu Gln Gly Glu Gln Pro Lys Lys Leu Asp Ser Glu
20 25 30
Arg Asp Lys Ala Arg Lys Glu Val Glu Glu Tyr Val Lys Lys Ile Val
35 40 45
Gly Glu Ser Tyr Ala Lys Ser Thr Lys Lys Arg His Thr Ile Thr Val
50 55 60
Ala Leu Val Asn Glu Leu Asn Asn Ile Lys Asn Glu Tyr Leu Asn Lys
65 70 75 80
Ile Val Glu Ser Thr Ser Glu Ser Gln Leu Gln Ile Leu Met Met Glu
85 90 95
Ser Arg Ser Lys Val Asp Glu Ala Val Ser Lys Phe Glu Lys Asp Ser
100 105 110
Ser Ser Ser Ser Ser Ser Asp Ser Ser Thr Lys Pro Glu Ala Ser Asp
115 120 125
Thr Ala Lys Pro Asn Lys Pro Thr Glu Pro Gly Glu Lys Val Ala Glu
130 135 140
Ala Lys Lys Lys Val Glu Glu Ala Glu Lys Lys Ala Lys Asp Gln Lys
145 150 155 160
Glu Glu Asp Arg Arg Asn Tyr Pro Thr Ile Thr Tyr Lys Thr Leu Glu
165 170 175
Leu Glu Ile Ala Glu Ser Asp Val Glu Val Lys Lys Ala Glu Leu Glu
180 185 190
Leu Val Lys Val Lys Ala Asn Glu Pro Arg Asp Glu Gln Lys Ile Lys
195 200 205
Gln Ala Glu Ala Glu Val Glu Ser Lys Gln Ala Glu Ala Thr Arg Leu
210 215 220
Lys Lys Ile Lys Thr Asp Arg Glu Glu Ala Glu Glu Glu Ala Lys Arg
225 230 235 240
Arg Ala Asp Ala Lys Glu Gln Gly Lys Pro Lys Gly Arg Ala Lys Arg
245 250 255

```
195         Gly Val Pro Gly Glu Leu Ala Thr Pro Asp Lys Lys Glu Asn Asp Ala
196                     260                 265                 270
197         Lys Ser Ser Asp Ser Ser Val Gly Glu Glu Thr Leu
198                 275                 280
199    <210> SEQ ID NO 4
200    <211> LENGTH: 106
201    <212> TYPE: PRT
202    <213> ORGANISM: Streptococcus pneumoniae
203    <400> SEQUENCE: 4
204         Lys Pro Glu Lys Lys Val Ala Glu Ala Glu Lys Lys Val Glu Glu Ala
205           1               5                  10                  15
206         Lys Lys Lys Ala Glu Asp Gln Lys Glu Glu Asp Arg Arg Asn Tyr Pro
207                       20                  25                  30
208         Thr Asn Thr Tyr Lys Thr Leu Glu Leu Glu Ile Ala Glu Ser Asp Val
209                   35                  40                  45
210         Glu Val Lys Lys Ala Glu Leu Glu Leu Val Lys Glu Glu Ala Lys Glu
211                50                  55                  60
212         Pro Arg Asn Glu Glu Lys Val Lys Gln Ala Lys Ala Glu Val Glu Ser
213              65                  70                  75                  80
214         Lys Lys Ala Glu Ala Thr Arg Leu Glu Lys Ile Lys Thr Asp Arg Lys
215                           85                  90                  95
216         Lys Ala Glu Glu Glu Ala Lys Arg Lys Ala
217                       100                 105
218    <210> SEQ ID NO 5
219    <211> LENGTH: 109
220    <212> TYPE: PRT
221    <213> ORGANISM: Streptococcus pneumoniae
222    <400> SEQUENCE: 5
223         Thr Glu Pro Gly Glu Lys Val Ala Glu Ala Lys Lys Lys Val Glu Glu
224           1               5                  10                  15
225         Ala Glu Lys Lys Ala Lys Asp Gln Lys Glu Glu Asp Arg Arg Asn Tyr
226                       20                  25                  30
227         Pro Thr Ile Thr Tyr Lys Thr Leu Glu Leu Glu Ile Ala Glu Ser Asp
228                   35                  40                  45
229         Val Glu Val Lys Lys Ala Glu Leu Glu Leu Val Lys Val Lys Ala Asn
230                50                  55                  60
231         Glu Pro Arg Asp Glu Gln Lys Ile Lys Gln Ala Glu Ala Glu Val Glu
232              65                  70                  75                  80
233         Ser Lys Gln Ala Glu Ala Thr Arg Leu Lys Lys Ile Lys Thr Asp Arg
234                           85                  90                  95
235         Glu Glu Ala Glu Glu Glu Ala Lys Arg Arg Ala Asp Ala
236                       100                 105
237    <210> SEQ ID NO 6
238    <211> LENGTH: 4
239    <212> TYPE: PRT
240    <213> ORGANISM: Streptococcus pneumoniae
241    <400> SEQUENCE: 6
W--> 242         Lys Xaa Xaa Glu
243           1
244    <210> SEQ ID NO 7
```

all item 10 on Error Summary Sheet

Please note:
Use f n's and/or Xaa's have been detected in the Sequence Listing. Please review any subsequent sequences in the Sequence Listing t ensure that a c rresponding explanation is presented in the <220> - <223> section of each sequence presenting at least one n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION **US/09/056,019**

DATE: 09/23/98
TIME: 14:11:31

Input Set: **I056019.RAW**

Line	?	Error/Warning	Original Text
242	W	"N" or "Xaa" used: Feature required	Lys Xaa Xaa Glu
788	W	"N" or "Xaa" used: Feature required	Xaa Glu Asn Glu Gly
825	W	"N" or "Xaa" used: Feature required	Glu Val Xaa Gly Glu Leu Ala Thr Pro Asp L